

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P559062

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559062
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-1-LD4-2HI-35-UNV-82-87-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1408.0 lumens
Efficiency: N/A
Efficacy: 65.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

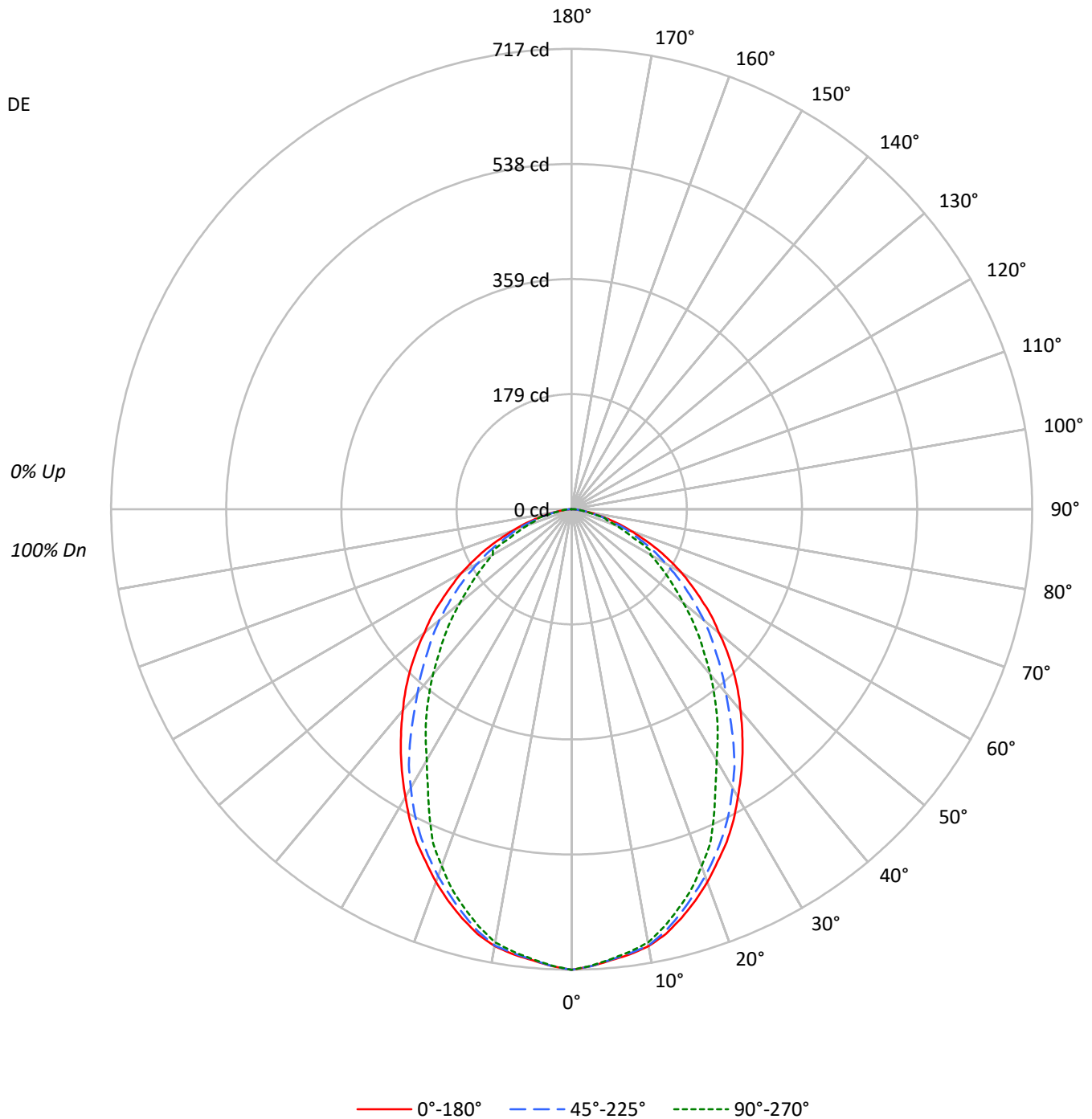
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100													100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7720	7720	7720
5°	7615	7606	7597
10°	7549	7541	7486
15°	7346	7271	7170
20°	7076	6962	6772
25°	6785	6637	6223
30°	6431	6224	5607
35°	6091	5753	5186
40°	5744	5243	4718
45°	5415	4847	4267
50°	5012	4498	3805
55°	4637	4076	3408
60°	4247	3640	3053
65°	3739	3189	2702
70°	3078	2792	2297
75°	2450	2138	2242
80°	1643	1543	1438
85°	1025	1223	1433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5415 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	4.7
10°-20°	183.2	13.0
20°-30°	253.7	18.0
30°-40°	270.5	19.2
40°-50°	246.8	17.5
50°-60°	193.3	13.7
60°-70°	126.0	8.9
70°-80°	55.8	4.0
80°-90°	12.0	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	503.7	35.8
0°-40°	774.1	55.0
0°-60°	1214.2	86.2
0°-90°	1408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1408.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	717	717	717	717	717	
5°	705	704	704	703	703	67
15°	659	659	652	646	643	185
25°	571	568	559	539	524	262
35°	464	460	438	405	395	290
45°	356	348	318	292	280	274
55°	247	240	217	192	182	222
65°	147	138	125	128	106	145
75°	59	55	51	49	54	63
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	717.2	717.2	717.2	717.2	717.2
2.5°	712.2	712.2	712.2	711.4	711.4
5°	704.8	703.9	703.9	703.1	703.1
7.5°	699.0	698.1	697.3	696.5	694.8
10°	690.7	690.7	689.9	685.7	684.9
12.5°	677.4	676.6	673.3	667.5	665.8
15°	659.2	659.2	652.5	645.9	643.4
17.5°	639.3	638.4	630.2	623.5	620.2
20°	617.7	616.1	607.8	597.0	591.2
22.5°	593.7	593.7	583.7	569.6	563.8
25°	571.3	568.0	558.8	538.9	524.0
27.5°	545.6	540.6	530.7	502.5	485.1
30°	517.4	514.9	500.8	464.3	451.1
32.5°	490.9	486.7	471.8	433.6	422.9
35°	463.5	460.2	437.8	404.6	394.7
37.5°	436.1	432.0	403.8	377.3	364.8
40°	408.8	403.8	373.1	349.1	335.8
42.5°	383.1	376.4	346.6	320.9	306.0
45°	355.7	348.2	318.4	291.9	280.3
47.5°	328.3	321.7	294.3	267.0	253.7
50°	299.3	293.5	268.6	241.3	227.2
52.5°	275.3	266.2	242.1	214.8	203.1
55°	247.1	239.6	217.2	191.5	181.6
57.5°	221.4	213.9	193.2	169.1	160.9
60°	197.3	186.6	169.1	148.4	141.8
62.5°	170.8	162.5	147.6	130.2	138.5
65°	146.8	138.5	125.2	127.7	106.1
67.5°	120.2	116.1	104.5	92.9	89.5
70°	97.8	92.9	88.7	76.3	73.0
72.5°	77.9	73.0	67.2	60.5	58.0
75°	58.9	54.7	51.4	48.9	53.9
77.5°	40.6	39.0	36.5	34.0	33.2
80°	26.5	25.7	24.9	24.0	23.2
82.5°	15.8	15.8	15.8	15.8	15.8
85°	8.3	9.1	9.9	10.8	11.6
87.5°	5.0	5.0	5.8	6.6	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)